



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,296	12/15/2003	Robert R. Bushey	130332.00044	3736
67942	7590	05/16/2007		
RAMAN N. DEWAN JACKSON WALKER, L.L.P. 100 CONGRESS AVENUE SUITE 1100 AUSTIN, TX 78701			EXAMINER NEWAY, SAMUEL G	
			ART UNIT 2626	PAPER NUMBER
			MAIL DATE 05/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/736,296

Applicant(s)

BUSHEY ET AL.

Examiner

Samuel G. Neway

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/15/03, 4/20/04, 3/6/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is responsive to the Application filed on 15 December 2003.

Claim Objections

2. Claim 1 is objected to because of the following informalities: in line 19, "if neither an action nor an object are included" is believed to be a typographical error for 'if neither an action nor an object is included'.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1 and 17 – 22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1 and 17 – 22 are directed to "Software" (computer program) per se.

Computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized.

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 – 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Carpenter et al. (USPN 6,269,153).

Claim 1:

Carpenter discloses software for routing calls in a call center based on a transaction request obtained from a natural language caller utterance, the software embodied in computer readable media and when executed operable to (Abstract):

evaluate the natural language caller utterance in accordance with a statistical language modeling speech recognition utility ("routing system 102 receives calls from a caller 216 and provides information and poses questions to the caller 216 using voice prompts produced by the voice synthesizer 202. The caller 216 provides voice responses", col. 3, lines 42-46 FIG. 1 and related text);

determine whether the natural language caller utterance includes an action;
determine whether the natural language caller utterance includes an object (FIG. 2 and related text);

if the natural language caller utterance includes only an action, elicit a natural language caller utterance identifying an object ("...the caller 110 may say 'Checking accounts, please'. This may indicate that the call is to be directed to the New Accounts Department 104, where the caller 110 can inquire about opening a new checking account, or it may indicate that the caller 110 has a question about his already existing checking account, in which case the call should be directed to the Checking Department 106. In this case, it is necessary for the call routing system 102 to pose a disambiguating question ... ", col. 3, lines 1-13);

if the natural language caller utterance includes only an object, elicit a natural language caller utterance identifying an action (FIG. 5, item 504 and related text);

if neither an action nor an object is included in the natural language caller utterance, prompt the caller for a natural language utterance identifying an action and an object (FIG. 6, item 606 and related text);

once an action and an object have been identified, locate an intersection of the action and the object in an action-object matrix; determine a routing destination from a look-up table associated with the action-object matrix intersection; and direct the caller to the routing destination ("The routing module matches information received from the caller interface 201 against one of a plurality of documents 210A . . . N using

information contained in a scoring matrix 212", col. 3, lines 31-34, FIG. 2 and related text).

Claim 2:

Carpenter discloses a method for identifying a routing destination in a service center (Abstract), comprising:

prompting a user to convey a request; receiving a natural language utterance from the user ("routing system 102 receives calls from a caller 216 and provides information and poses questions to the caller 216 using voice prompts produced by the voice synthesizer 202. The caller 216 provides voice responses", col. 3, lines 42-46 FIG. 1 and related text);

comparing the natural language utterance to an action-object matrix (FIG. 2, item 212 and related text); identifying a routing destination based upon results of the natural language utterance to action-object matrix comparison; and routing the user to the routing destination ("The routing module matches information received from the caller interface 201 against one of a plurality of documents 210A . . . N using information contained in a scoring matrix 212", col. 3, lines 31-34, FIG. 2 and related text).

Claim 3:

Carpenter discloses the method of claim 2, further comprising: querying the action-object matrix to identify related objects if only an action and not an object is

included in the natural language utterance; and prompting the user for selection of a related object (FIG. 5, item 504 and related text).

Claim 4:

Carpenter discloses the method of claim 2, further comprising: querying the action-object matrix to identify related actions if an object and not an action is included in the natural language utterance; and prompting the user for selection of a related action ("...the caller 110 may say `Checking accounts, please`. This may indicate that the call is to be directed to the New Accounts Department 104, where the caller 110 can inquire about opening a new checking account, or it may indicate that the caller 110 has a question about his already existing checking account, in which case the call should be directed to the Checking Department 106. In this case, it is necessary for the call routing system 102 to pose a disambiguating question ... ", col. 3, lines 1-13).

Claim 5:

Carpenter discloses the method of claim 2, further comprising initiating a disambiguation dialog with the user where an action-object combination cannot be found in the action-object matrix (FIG. 2, item 208 and related text).

Claim 6:

Carpenter discloses the method of claim 2, further comprising identifying at least one of an action, an object and an action-object combination using a statistical language modeling speech recognition utility (FIG. 2, item 204 and related text).

Claim 7:

Carpenter discloses a system for routing a service center user based on a natural language request (Abstract), comprising:

at least one processor; memory operably associated with the at least one processor; a program of instructions storable in the memory and executable by the processor (FIG. 3 and related text),

the program of instructions operable to identify a task to be performed from a natural language user request and a task matrix and to direct the user to a service center agent for performance of the task (Abstract).

Claim 8:

Carpenter discloses the system of claim 7, further comprising the program of instructions operable to: identify an action-object combination from the natural language user request; and locate a service agent to perform the task based on the identified action-object combination and the task matrix (FIG. 2, items 206 , 212, and related text).

Claim 9:

Carpenter discloses the system of claim 7, further comprising the service center agent operable to provide automated user assistance in performance of the task ("automatic call routing", Abstract).

Claim 10:

Carpenter discloses the system of claim 7, further comprising the service center agent operable to provide technician assisted performance of the task (FIG. 2, item 214 and related text).

Claim 11:

Carpenter discloses the system of claim 7, further comprising the task matrix including a plurality of available service center actions each cross-referenced with one or more objects creating action-object combinations and where the action-object combinations define tasks available from a service center agent (FIG. 2, item 212 and related text).

Claim 12:

Carpenter discloses the system of claim 11, further comprising the program of instructions operable to reference a look-up table containing service center agent routing destinations in response to a match between an action and an object in the natural language utterance and an action-object combination in the action-object matrix (FIG. 2, items 218 and related text).

Claim 13:

Carpenter discloses the system of claim 7, further comprising the program of instructions operable to identify at least one of an action or an object in the natural language utterance to identify the task to be performed (FIG. 2, item 204 and related text).

Claim 14:

Carpenter discloses the system of claim 7, further comprising the program of instructions operable to prompt the user for at least one additional natural language user request in response to identifying an action and no object in the natural language user utterance (FIG. 5, item 504 and related text).

Claim 15:

Carpenter discloses the system of claim 7, further comprising the program of instructions operable to prompt the user for at least one additional natural language user request in response to identifying an object and no action in the natural language user utterance ("...the caller 110 may say `Checking accounts, please`. This may indicate that the call is to be directed to the New Accounts Department 104, where the caller 110 can inquire about opening a new checking account, or it may indicate that the caller 110 has a question about his already existing checking account, in which case the call should be directed to the Checking Department 106. In this case, it is necessary for the call routing system 102 to pose a disambiguating question ... ", col. 3, lines 1-13).

Claim 16:

Carpenter discloses the system of claim 7, further comprising the program of instructions operable to prompt the user for confirmation of the identified task requested ("If the original query 404 is `car loans`, for example, the question produced may be `Would that be new car loans?' ... ", col. 10, lines 52-59).

Claim 17:

Carpenter discloses software for routing users to an appropriate service center destination (Abstract), the software stored in computer readable media and when executed operable to:

match a transaction request derived from a natural language utterance to a transaction option in a transaction option matrix ("the system matches a query to a document based on a match of the terms contained in the query with the terms contained in the document", col. 2, lines 11-23);

and facilitate connection between the user and a service module operable to effect processing of the requested transaction (Abstract).

Claims 18 – 22:

Claims 18 – 22 are similar in scope and content to claims 8 – 16 and are rejected with the same rationale.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Halverson et al. (USPN 6,742,021) discloses the navigation of electronic data by means of spoken natural language requests, and to feedback mechanisms and

methods for resolving the errors and ambiguities that may be associated with such requests.

Bers et al. (USPN 6,895,083) discloses a system and method of routing of telephone calls based on identified caller goals and the cost and/or benefit of routing the call to a customer care call center best equipped to respond to the needs of the caller.

Dumoulin (USPN 6,856,957) discloses a method and apparatus for using output of an automatic speech recognizer to improve a query in a call routing or information retrieval system.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel G. Neway whose telephone number is 571-270-1058. The examiner can normally be reached on Monday - Friday 8:30AM - 5:30PM EST.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2626

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SN

SN


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600